

LIEBHERR MACHINES BULLE SA

EXECUTIVE ORDER U-R-018-0027 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR ENGINE FAMILY		DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)			
2001	1LHAL9.96ATA	6.6 and 10.0	Diesel	8000			
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT A	APPLICATION			
Direct Diesel Injection, Turbocharger, Electronic Control Module			Crane, Loader, Dozer, Compressor				
ENGINE MODELS (rated power in kilowatts, kw)	D 926 TI-E (244 kw),	D 926 TI-E (183 kw), D 926	TI-E (274 kw), D 926 TI-E (152 k	(w), D 926 TI-E (224 kw)			

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)				OPACITY (%)			
CLASS			нс	NOx	NMHC+NO _X	СО	PM	ACCEL	LUG	PEAK
130 <u><</u> KW < 225	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	20	15	50
225 <u><</u> KW<450	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
 .		CERT	0.3	6.0	6.0	0.6	0.10	11	1	41

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year, are not covered by this Executive Order.

Executed at El Monte, California on this

_ day <u>of</u> June 2001.

K. B. Summerfield, Chief

Mobile Source Operations Division